

REMARKS

Claims 1, 9-12, 16 and 17 are in this application and are presented for consideration. By this Amendment, Applicant has amended claims 1 and 16. Applicant has also added new independent claim 17.

Claims 1, 9-12 and 16 have been rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The Office Action states that the specification fails to provide an enabling disclosure as to how to make and/or use the second detent contour of the mirror foot in such a manner that the second detent contour is capable of being latched or unlatched to the mirror carrier.

Applicant respectfully traverses the rejection. The specification clearly provides information on how the second detent contour of the mirror foot is connected to the mirror carrier on page 14, line 13 to page 15, line 13. Specifically, page 14, lines 13-15 of the specification states:

Arranged radially opposite one another on the mirror foot 1 are two detent contours 15 and 16, into which two functionally complementary detent elements on the mirror carrier 3, which are not shown in Fig. 1, may engage.

The detent contours 15 and 16 are disposed on the mirror foot such that the mirror carrier is secured in position when the detent elements of the mirror carrier engage the detent contours 15 and 16. When a force is applied to the mirror carrier, the detent elements of the mirror are pressed up against the sliding surface of the detent contours 15, 16 so that as soon as the detent elements reach the top end of the sliding surfaces the detent elements unlatch and the mirror

carrier can be swivelled without greater resistance. All of this is clearly supported in the specification on page 14, line 13 to page 15, line 13. As such, it is Applicant's position that the claims contain subject matter which is described in the specification in such a way as to enable one skilled in the art to make and use the invention.

Claim 1 has been rejected under 35 U.S.C. 102(b) as being anticipated by Hashiguchi et al. (US 3,889,8915).

The present invention relates to an outside mirror for a vehicle. A mirror foot is provided for fastening to the vehicle. The mirror foot has a sleeve. The mirror foot is fastened to a mirror carrier such that the mirror carrier swivels about a swivelling axis. A first detent element is associated with either the mirror foot or the mirror carrier. The first detent element is flexible so that a spring force is generated when the first detent element is deflected when the mirror carrier is connected to the mirror foot. The first detent element engages a first detent contour to connect the mirror foot to the mirror carrier. The mirror carrier is secured when the mirror carrier engages the second detent contour. The sleeve is located within the mirror carrier when the mirror carrier engages the second detent contour of the mirror foot. The mirror carrier advantageously disengages the second detent contour when a force above a force threshold is applied to the mirror carrier so that the mirror carrier swivels freely about the swivel axis. This advantageously allows the mirror carrier to fold in when the mirror accidentally hits an object. The first detent element of the present invention advantageously provides a spring force in one element so that a spring and another element are not used as provided in conventional techniques. This advantageously simplifies the design. The prior art

as a whole fails to disclose such features.

The present invention advantageously achieves two design criteria related to vehicle safety. First, the present invention advantageously provides a mirror carrier that is capable of swivelling without great resistance out of its normal position into a folded-in position during impact so that the risk of injury is reduced when the mirror hits an obstruction. Second, the present invention advantageously provides a mirror carrier that is firmly connected to the mirror foot in order to rule out unintentional displacement of the mirror carrier, especially as a result of vibration, when the vehicle is moving. The prior art as a whole fails to disclose such advantages.

Hashiguchi et al. discloses a collapsible rear view mirror apparatus. A mirror 10 is attached to one end of a mirror arm 11. At the other end of the arm 11 is provided a ball element 12. The ball element 12 constitutes a ball and socket joint in cooperation with a first socket element 17 and fixed to a support member 14. The ball element 12 is held between first and second socket elements 17 and 18 by means of a coil spring 19 urging the second socket element 18 toward the first socket element 17. The ball element 12 has a spherical surface 22, which has spherically-surfaced cross-shape ridges 23 formed by partially removing four portions of the ball element 12 to provide four spherically-surfaced recessed sectors 22a. When an external force is applied to the mirror 10 or mirror arm 11, the ball element 12 receives a force causing it to rotate within the socket elements, which causes the cross-shape ridges 23 to detach of their mating cross-shape recesses 25 and to bear against a concave semi-spherical surface 24 of the second socket element 18, compressing the coil spring 19. Once the cross-shape ridges

23 are caused to bear against the concave semi-spherical surface 24, the ridges 23 and the surface 24 will have a co-axial center so that the ball element 12 and the mirror stay 11 may be freely rotated, allowing the mirror arm 11 and the rear view mirror 10 to pivot downwardly about the ball and socket joint.

Hashiguchi et al. fails to teach and fails to suggest the combination of a mirror foot having a sleeve as claimed. At most, Hashiguchi et al. teaches a ball and socket arrangement in which the ridges 23 of ball element 12 disengage recesses 25 so that the ball element 12 rotates when a force is applied. In contrast to Hashiguchi et al., the present invention takes a different approach by providing a mirror foot with a sleeve. The mirror carrier of the present invention is fitted over the sleeve of the mirror foot so that the mirror carrier pivots with respect to the mirror foot. This is significant in the present invention because when the mirror carrier disengages the second detent contour of the mirror foot, the mirror carrier advantageously pivots about the swivel axis to a folded in position to reduce the risk of injury when the mirror carrier hits a person or other obstruction. Compared with the present invention, Hashiguchi et al. only discloses a support member 14 having a socket element 18 but fails to teach a mirror foot having a sleeve as claimed.

Further, Hashiguchi et al. fails to teach or suggest the first detent element of the present invention. In the present invention, the first detent element is flexible so that when the mirror carrier is connected to the mirror foot, the detent element deflects when mirror carrier engages the mirror foot. The detent element generates a spring force to maintain the mirror carrier with a specific initial tension elastically against the mirror foot. This is a different approach than that

of Hashiguchi et al. In contrast to the present invention, Hashiguchi et al. teaches a spring 19 in connection with socket element 18. The socket element 18 is not flexible as featured in the claimed combination. This is significant in the present invention because it is the first detent element itself that generates the spring force to maintain the mirror carrier with a specific initial tension. Hashiguchi et al. fails to teach that the socket element 18 is flexible such that the socket element 18 generates a spring force to maintain the ball element 12 in elastic tension. In contrast to the present invention, Hashiguchi et al. teaches a socket element 18 in combination with a spring 19 to generate a spring force. As such, the prior art as a whole teaches a different approach and fails to suggest the features of the present invention. Accordingly, Applicant respectfully requests that the Examiner favorably consider claim 1 as now presented.

Claim 1 has been rejected under 35 U.S.C. 102(b) as being anticipated by Gilbert et al. (US 5,432,640).

Gilbert et al. discloses a spigot type break-away mirror 10 for an automobile. The mirror 10 includes a supporting base 11 and a mirror subassembly 16. The base 11 has an upstanding spigot 11 which has a curved constraining surface 13. The mirror subassembly 11 is provided with a locating surface 17 engageable over the constraining surface 13 which constrains pivotable movement of the mirror subassembly 11 to be about the spigot 12. A cam pad 23 and recess surface 24 are provided on the base 11 and the mirror subassembly 16 respectively. A spring 20 cooperates between the base 11 and mirror subassembly 16 to retain the cam 23 and recess surfaces 24 in engagement. The cam pad 23 and recess surfaces 24 cause

the mirror subassembly 16 to cam outwardly away from the supporting base 11 if the mirror subassembly is caused to deflect upon striking an obstruction.

Gilbert et al. fails to teach or suggest the first detent element of the present invention. In the present invention, the first detent element is flexible so that when the mirror carrier is connected to the mirror foot, the detent element deflects when mirror carrier engages the mirror foot. The detent element generates a spring force to maintain the mirror carrier with a specific initial tension elastically against the mirror foot. This is a different approach than that of Gilbert et al. In contrast to the present invention, Gilbert et al. teaches that pivotal breakaway movement only occurs when the mirror subassembly 16 moves out of central recess 25 by a distance 'D', compressing spring 20, so that the projection 28 can traverse the curved surface. The projection 28 of Gilbert et al. is not flexible and does not itself generate a spring force as featured in the claimed combination. This is significant in the present invention because it is the first detent element itself that generates the spring force to maintain the mirror carrier with a specific initial tension. Gilbert et al. fails to teach that the projection 28 is flexible such that the projection 28 itself generates a spring force to maintain the mirror subassembly 16 in elastic tension. As such, the prior art as a whole teaches a different approach and fails to suggest the features of the present invention. Accordingly, Applicant respectfully requests that the Examiner favorably consider claim 1 as now presented.

Claim 16 has been objected to because of a minor informality. Applicant has amended claim 16 to cure the informality. Applicant would like to thank the Examiner for the careful review of the claims.

The drawings have been objected to under 37 CFR 1.83(a). The Office Action states that the structure that allows the second detent contour to be latched or unlatched to the mirror carrier must be shown or the features canceled from the claims.

Applicant has attached a replacement sheet of drawings of Figure 1. Figure 1 has been revised to show the detent elements 70, 72 of the mirror carrier. Applicant has also amended the specification as shown above to provide the reference numerals 70, 72 for the detent elements of the mirror carrier 3. Applicant respectfully requests that the drawings as now presented be entered.

Applicant has added new independent claim 18. New claim 18 provides for similar features as found in claim 16, but highlights the snap in retaining function of the first detent element. Applicant respectfully requests that the Examiner favorably consider new independent claim 18.

Favorable action on the merits is requested.

Respectfully submitted
For Applicant,



By: _____
John James McGlew
Reg. No. 31,903
McGLEW and TUTTLE, P.C.

- and -



By: _____
Brian M. Duncan
Reg. No. 58,505
McGLEW and TUTTLE, P.C.

Attached: One (1) Sheet of Replacement Drawings
Petition for One Month Extension of Time

JJM:BMD
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DATED: June 25, 2007
BOX 9227 SCARBOROUGH STATION
SCARBOROUGH, NEW YORK 10510-9227
(914) 941-5600

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